

Abstract**DIFFERENTIAL IMAGING METHOD AND SYSTEM**

A differential imaging system is particularly efficacious for detecting objects in high dispersion or light-scattering mediums, such as seawater. Such a device especially useful in mine detection. A single burst of illumination is used as the light sensitive portion of the system is gated so as to collect at least two images of reflected light from the same burst of illumination. The first image is modified and subtracted from the second image to remove the common noise, and to further enhance the image of the object to be detected.